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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5

EPA Region 5 Records Ctr.

MEMORANDUM



228775

DATE: June 29, 1993

SUBJECT: Summary of Site Presentation to Regional Decision Team (RDT)

FROM: Wm. Turpin Ballard *WTB*  
Remedial Project Manager, 5HSRM-6J

TO: File

On May 14, 1993, the Master Metals (MM) Site Assessment Team (SAT) presented pertinent facts of the site to the RDT.

The site has known releases of lead to ground water, soils, and ambient air. Concentrations in on-site soil are as high as eleven percent lead. Near-site air monitoring shows consistent exceedances of National Ambient Air Quality Standards (NAAQS) on a quarterly average basis. Site workers and family members have shown health-threatening levels of lead in blood samples.

The site is an interim status RCRA facility. It currently is operating under RCRA authority, but is in violation of a Federal RCRA consent decree (CD) and a State combined Consent order for RCRA and Air compliance. The facility has logged thousands of RCRA violations, and is out of compliance with the Air portion of the State order.

The SAT recommended deferral of the actual site clean-up to RCRA authority. The consent decree requires specific corrective actions to be taken. The facility has been recalcitrant in complying with the CD. If the facility should become financially unable to perform the necessary corrective actions, and lose its permit to operate, Superfund is prepared to take the necessary response actions to stabilize and remediate the site. However, the SAT recommended that Fund money only be expended if facility operations cease, to prevent continued facility operations from re-contaminating the site.

The SAT also intends to initiate off-site sampling in residential and recreational areas near the site, to assess the airborne deposition pathway and the potential for exposure of nearby populations to airborne particulate lead. A sampling plan has been developed at the On-Scene Coordinator's direction by the Technical Assistance Team contractor.

# **SUPERFUND ACCELERATED CLEANUP MODEL REGIONAL DECISION TEAM SITE BRIEFING**

## **MASTER METALS CLEVELAND, OHIO**

The site assessment team (SAT) has reviewed the existing data on the Master Metals site (MM), and has developed the recommendations outlined below.

### **BACKGROUND**

Master Metals is located in the "flats" area of downtown Cleveland, in a heavily industrialized section of the city (Figure 1). The site is bordered on two sides by railroad tracks, and has LTV Steel as a neighbor to the east and south. The nearest surface water is the Cuyahoga River, approximately 1500 feet to the east. There is a playground/athletic field approximately 1500 feet to the west, and the nearest residential area is approximately 2000 feet to the northwest and 70 feet higher in elevation (Figure 2).

The MM property is approximately 4.3 acres in areal extent. The facility was initially constructed by National Lead in 1932 on a slag fill (from nearby steel plants). NL operated the facility as a lead alloy manufacturing operation, of which battery cracking was a part. NL sold the facility to Master Metals in 1979, which continued to operate as a secondary lead smelter.

The facility is listed in CERCLIS, but it has not yet been scored, and to date no search has been conducted under CERCLA for potentially responsible parties (PRPs). However, RCRA does have a preliminary list that could serve as a basis for a PRP search.

MM is an interim status RCRA facility with a long history of non-compliance, poor operating practices, and documented releases of hazardous materials to the environment. Several of its waste management units lost interim status for failure to certify compliance with financial assurance requirements. MM's Part B permit application was submitted in 1985 and revised in 1989. No decision has been made by the State on this permit.

EPA filed a complaint in Federal court in 1987, and the facility entered into a 1990 RCRA Consent Decree with EPA. Within 8 months of entry, sufficient violations were documented to warrant assessment of \$1.6 million in stipulated penalties. Subsequent periodic inspections have found numerous additional violations of the decree and the permit. The State of Ohio has taken several enforcement actions for RCRA, Air, and Clean Water Act violations.

To date RCRA has not been able to compel MM to comply with the Consent Decree, because the courts have been very accommodating to MM, or slow to act (see attachment 1)

#### NATURE AND EXTENT OF CONTAMINATION

The releases of most concern are airborne release of lead via fugitive emissions caused by typical operations of the facility. Figure 3 shows a schematic layout of the site, along with near- and on-site sampling locations.

The National Ambient Air Quality Standard (NAAQS) for lead is 1.5 ug/m<sup>3</sup> on a quarterly average. Although NAAQS are not strictly enforceable in and of themselves, OEPA issued a Directors Findings of Fact and Orders and Orders that required compliance with NAAQS as a quarterly average. Monitored exceedances indicate MM has been out of compliance with this standard since the monitoring was initiated in January 1992 (see Table 1).

Table 2 presents results of soil sampling at the facility conducted by the U.S. EPA Removal Program in July 1992. Total lead concentrations on site ranged from approximately 6,000 ppm to 115,000 ppm. EPA's current action levels for lead in soil range from 500 ppm to 1,000 ppm.

Table 3 presents results of ground water sampling. Clearly MCLs are exceeded for lead and cadmium. However, all drinking water is supplied by the Cleveland water system, and the subsurface water at MM would probably not be considered a potential source of drinking water under U.S. EPA ground water classification guidelines (Class III).

EPA is initiating additional soil sampling in the nearest residential area (to the northwest) to assess the levels of lead in the soils. Although the prevailing winds are to the northeast, we want to get a feel for the potential for airborne deposition of lead onto residential areas. If high levels are found (taking into account the urban nature of the area), additional ambient air sampling will be done to determine if ambient air deposition from MM is, indeed, the likely cause.

Source related response actions need not be delayed pending these results.

#### QUALITATIVE RISK ANALYSIS

A preliminary ecological review conducted by Region 5 Technical Support Section indicated there are no ecologically significant habitats in the area, but that the high levels of heavy metals in soil and ground water in proximity to the Cuyahoga river warrant a response action. Although stormwater is collected and discharged to the Northeast Ohio Regional Sanitation District (NEORS) it does not meet pretreatment standards and may pass through the

POTW into the Cuyuhoga River 1/2 mile away, and possibly Lake Erie.

Potential pathways of exposure under current land use are:

- 1) Soil ingestion subsequent to airborne particulates deposited on the ground surface near residential areas;
- 2) Inhalation of airborne lead;
- 3) Exposure to lead dust carried home on worker clothing;
- 4) Worker exposure
- 5) Trespasser exposure to on-site dust inhalation and incidental ingestion; and
- 6) contaminated materials used as residential backfill

Pathways 3, 4, and 6 are current pathways. Elevated blood lead levels in workers and family members have been documented.

The Agency for Toxic Substances and Disease Registry (ATSDR), through the Ohio Department of Health, has conducted a preliminary health assessment, and identified three areas that pose a risk to human health:

- 1) air emissions of heavy metals;
- 2) disposal of fill in residential areas;
- 3) exposure of on-site workers and their families (families through dust carries home on clothing).

The health assessment makes several recommendations, including additional off-site soil sampling at the Valley View Apartments, and a nearby playground.

#### ENFORCEMENT STATUS

RCRA           Currently in violation of interim status regulations  
Has posted inadequate RCRA financial assurance.

Currently in violation of 1990 Consent Decree. \$1.6 million in stipulated penalties pending. Additional violations documented.

Facility is conducting a removal action under a RCRA agreement with the state (DFF & O). Among other requirements, the order requires MM to process fill material used in a residential property which have been excavated and returned to the site.

Facility is operating a non-permitted boiler industrial furnace (BIF) in violation of RCRA

Owner historically non-compliant and recalcitrant.

Status of RCRA compliance in OEPA DFF & O not known.

AIR Probably in violation of OEPA Director's Findings and Orders. State has not made a determination.

WATER Facility is a significant non-complier for pretreatment of stormwater runoff and facility-generated wastewaters for pH, copper, zinc, cadmium, and lead.

OSHA MM has a consent decree with OSHA for improving working conditions. MM owner recently convicted in criminal court of altering medical monitoring data (blood lead results) prior to reporting to OSHA. Sentenced to work release, so he can continue to operate the facility.

#### PRELIMINARY HRS SCORE

Based on available information, and making conservative assumptions where assumptions are necessary a preliminary scoring under HRS II indicates the site would be eligible for inclusion on the NPL. Additional scoring data are needed to develop a more accurate score.

#### PRELIMINARY RESPONSE ACTION ALTERNATIVES

Based on tasks identified in TES 9 contractor analysis of MM's closure plan.

- 1) Clean closure, Includes processing of all remaining recyclables on-site, with off-site disposal of all hazardous and solid waste residuals and contaminated soil. No demolition of buildings.

Cost estimate - \$5,168,000

- 2) Closure as a landfill. Includes on-site processing of all remaining recyclables, off-site disposal of all residual hazardous and solid waste, demolition and off-site disposal of all structures after necessary decon, covering entire site with a RCRA cap to prevent future exposure and release of heavy metals in soils, post-closure care.

Cost estimate - \$7,112,000

CAVEAT - these alternatives and estimates are based on existing closure requirements under RCRA. The estimates are preliminary, were developed for the RCRA program and are based on an assumption that the existing facility operation will process the existing recyclables, which is not likely if the facility is shut down or goes out of business. These are the best available cost estimates at this time, but are probably low by a factor of 1.5 to 2.

#### DISCUSSION

Master Metals has a RCRA Part A permit; however, MM is not

operating in compliance with interim status standards. The facility has continued operating under interim status authority, except it has lost interim status for waste piles. Financial assurances are required under RCRA to be posted when the Part B application is submitted to the State. No assurances were posted at the time of submittal. To date, the facility is not in compliance with financial assurance regulations.

The State has the delegated RCRA permitting authority. It may revoke MM's Part A permit or deny its Part B permit. A decision on either action is pending. The State may also choose to pursue enforcement of its DFF & O.

U.S. EPA has brought action in Federal Court to enforce the Consent Decree. To date, the Court has been lenient in its enforcement decisions. In the past MM has claimed LTV Steel is a likely source of lead as well as MM. Recently acquired air monitoring data strongly points to MM as the sole source of airborne lead.

#### RECOMMENDATIONS

The SAT has the following recommendations:

- response actions should be taken at this site under removal authority, including an effort to identify any other areas where material from MM was used as backfill. This action will constitute an early action under the SACM to address the source.
- Superfund should not initiate any response action on-site until the facility operations cease, to prevent re-pollution of the area.
- the State and Federal RCRA and Air programs must use all regulatory tools at their disposal to successfully conclude their enforcement actions before Superfund responds under CERCLA authority.

There is every expectation that MM ultimately will have to cease operations, and will not be viable to conduct the necessary cleanup. Therefore the SAT has initiated collection off-site samples as an interim action which will allow us to evaluate potential for risk from contaminants that may already have migrated off of MM, primarily via the air pathway, so that all necessary actions may be taken as soon as possible after MM ceases operations.

Response costs are estimated to be between 7 and 12 million dollars, based on closure of the site as a landfill. In addition to the response alternatives identified above, alternative treatment technologies will be evaluated for effectiveness, implementability, and cost.